

**THE GROWTH OF *FAGUS SYLVATICA* L. SEEDLINGS OF  
DIFFERENT PROVENANCES IN THE NURSERY OF TELENESŢI  
FOREST ENTERPRISE**

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The beech (*Fagus sylvatica* L.) is one of Europe's main forest tree species, growing in large areas of different environmental conditions. In the Republic of Moldova, the beech grows in the Eastern European limit of its natural area distributions, which naturally grows dispersed in the Central Plateau of Moldova, covering less than one percent of the country's forest area. Following the aridization of the climate during the recent decades, the problem of the stability and prospect of existence of this species in the structure of the forest fund appears. To study this issue, have been started the researches of dynamics of biomass accumulation in the above-ground part of beech saplings of different provenances installed in the Republic of Moldova, as well as their resistance to the action of unfavorable climatic factors.

For this purpose, in the fall of 2020, in the forestry nursery of the Telenesti forestry enterprise, seeds from different origins were sown: Baiut (Romania), Chernivtsi (Ukraine), Hirjauca and the Codrii and Plaiul Fagului scientific reserves (Republic of Moldova). The climate of the area where the nursery is located is temperate-continental with relatively warm winters and very hot, long-lasting summers. The habitat index of the experimental sector, are characterized by the forest-steppe ecotype in the valleys with the cambic chernozem soil, this are arid conditions for beech.

As a result of completing inventories, the diameters of the root collar and the height of the saplings were measured. Thus, the arithmetic average, of the diameters of the root collar, are: Chernivtsi  $3.42 \pm 0.16$  mm, Hirjauca  $3.34 \pm 0.21$  mm, Baiut  $3.54 \pm 0.18$  mm, Codrii  $4.41 \pm 0.19$  mm and Plaiul Fagului  $3.82 \pm 0.26$  mm. The indices of average increases in height, are as follows: Chernivtsi  $16.54 \pm 0.96$  cm, Hirjauca  $15.29 \pm 1.13$  cm, Baiut  $18.07 \pm 1.05$  cm, Codrii  $20.94 \pm 1.11$  cm and Plaiul Fagului  $17.93 \pm 1.13$  cm. Regarding the growth of the beech saplings in the experimental sector, by volume per provenance, in the second year of vegetation, the results are: Chernivtsi  $529 \pm 33$  mm<sup>3</sup>, Hirjauca  $614 \pm 76$  mm<sup>3</sup>, Baiut  $1149 \pm 176$  mm<sup>3</sup>, Plaiul Fagului  $1072 \pm 173$  mm<sup>3</sup> and Codrii  $1306 \pm 118$  mm<sup>3</sup>. The biggest increases were recorded by the saplings with the Codrii provenance. This confirms the thesis, presented by some researchers, that the beech saplings that grow in our country, are more xerophytic.

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